Notes on Dorsey
Volume 1.

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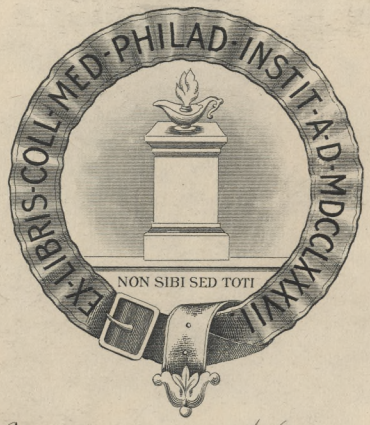

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Notes on the lectures of Dr. John Syng Dorsey professor of materia medica in the university of Penn.

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In commencing my lectures on the mat. med. Gentlemen, I need not inform you, that this chair has heretofore been filled by men of the most distinguished talents. In teaching the branch to which I have been appointed, I shall make every exertion to be useful to you; I am well apprised that all that a teacher can do, is to judiciously conduct you to a knowledge of the elements. The mat. med. has for its objects an acquaintance with every thing that preserves and supports life. Of these, it is highly necessary that the student should be informed. I propose to pursue the plan of my able predecessor, discriminating between what is useful & superfluous, rejecting the latter and giving you the former, in order that you may become good practitioners. We shall commence our lectures with the subject of <u>animal life</u>. Dr Johnson defines life to be the union

of soul & body. – This def. seems to be very obscure, but we must not forget the difficulty often attending definitions. I shall define life to be a power of resisting putrefaction & chemical changes or processes, & of preserving the system in a temp. different from that of the atmosphere. Among many, the phenomena of life as exhibited in motion, heat, sensation, & thought have been said to constitute life.
This doctrine has had many advocates, Dr Rush taught it & before him Dr Brown. This we consider completely refuted by the fact that life may exist without its phenomena. Fish when frozen for some time are not dead yet all the phenomena of life are absent. Vitality is as perfect in plants as in animals and in the oyster &c as in man.
By Drs. Brown Rush & others, life has been said to be a forced state, but none of them are the authors of it for Dr Cullen taught it as early as 1766 in the university of Edinburg. Stimuli can never create life. They say

a capacity for life exists, but this capacity for it, is life. Most of the actions of life are the effects of stimulants, as sound on the ear, light on the eye, &c &c. Can any vital action take place without the agency of stimulants? The actions of life are forced, but the powers of life are not forced. We might as well say that the air makes flame when we burn carbon &c. Tis impossible to produce life in dead matter, by the action of stimuli. If you take two fishes, one frozen dead, the other alive, by applying heat to both, the former will suffer putrefaction, & the latter will not. Next we may inquire whether or not organization influences life? Among the lower classes of animals the organization is very simple. In the Hydatid & polypus, we have examples. The Hydatid is extremely simple in its organization, it probably consists of nothing but a stomach and absorbents, and digestion constitutes its only function. The doctrine that the blood propagates life has been defended by Mr. J. Hunter. When we consider

that the blood is the great source of nutrition, & that every part, muscle, bone &c is formed of it, it seems not irrational to conclude that it possesses vitality. Life we know cannot arise out of, nor depend on mere organization. This of itself is nothing. Wherever there is the power of preservation, the principle or power of life may exist. An egg must have the power of self preservation & therefore life, as is proved by its resisting putrefaction & preserving its temperature. You will examine the experiments of Mr. Hunter on eggs. He found that a fresh egg does not freeze so soon by 7½ minutes as an egg which had been laid for some time. A fresh egg in a freezing mixture remained fluid at 29°, a dead egg was frozen at 32°. The same experiments were made on frogs, eels, snails &c. All these things seem conclusive of the truth, of which we have said that life may exist independent of its phenomena. The blood when exposed to similar experiments shewed the same results. This proves that

life is not dependent on organization. We confess our ideas are imperfect concerning what life is, but we know what it is not. Life then consists in certain powers, in a simple state only, a power to preserve itself & it has higher powers which become obvious as we rise in the scale of being. There are two other terms frequently made use of, & the definitions of which you will hear from another chair. These are irritability & sensibility. On the subject of sympathy I shall give you a few observations. This we define to be action from remote impression, & has had several names as consents of parts &c. So extensive is the influence of this over the animal economy that a ~~know~~ a knowledge of it is quite as important as the circulation of the blood. It has been divided into partial and universal. An instance of universal sympathy is afforded in those fevers which result from local diseases. Partial sympathy is divided into remote, contiguous and continuous. Remote is where a part is effected which

is not actually stimulated. Contiguous sympathy is that in which parts sympathise with each other which are in contact. Continuous is when the whole arterial system sympathizes with an inflammation of a part. We have also sympathy from sensation, as sighing in melancholia &c. but these are perhaps only partial. Mr. Hunter died of mental mortification, on receiving a rude speech from one of his rivals. Hectic fever one of the phenomena connected with this principle, has been attributed to the absorption of pus. But that it is not produced by this, we have several striking proofs – as in cases of scrophula, when Hectic appears before suppuration takes place, & in cases of suppurating bubo & much pus is absorbed without hectic fever being induced. Why is not Hectic fever occasioned by the suppurating stump, after an amputation of a scrophulous knee joint? Thus we see hectic

Sympathy
is not to be explained by suppuration.
Formerly all ~~kinds~~ of medicines were thought to act upon the system by being taken into the circulation. Sympathy can explain their operation much more satisfactorily. We may here notice the sympathy between the schneiderian membrane & the lachrymal sac & gland — when this membrane is irritated, these secrete and discharge a deluge of tears which washes the nostril. Light irriting and causing the contractions of the pupil another instance. The nose, throat, & fauces sympathise with the diaphragm hence sneezing &c. The bladder urethra & glans penis sympathise reciprocally. A calculus in one of the kidneys produces pain in the other. Inflammation of eye is often communicated to the other, and after removing a piece of iron filing from the surface of the eye (an operation which I frequently performed with my penknife) I find most uniformly that on the succeeding day, inflammation succeeds in the other eye. The stomach has a more extensive

connexion of associated actions, than any other organ in the system; Hence we find apoplexy nightmare &c from its undue distention, & in cases of dyspepsia we find a great variety of symptoms. Yellow fever as Dr Warren has observed has its throne and seat in the stomach, accordingly we find a great diversity of symptoms attending it. In one of the epidemicks in this city Dr Physick had a patient who complained of nothing but a pain in her foot. She died & upon examining her stomach it was found in a high state of inflammation and engorged with black vomit.

We find the same diversified sensations of pain in Psoas abscess &c the connexion of the stomach and skin has been long observed & often excites our surprise. The effects of cold water as reciprocally shewn, & the consequences of error in diet are well known to many of you.

Sympathy et cet.

We have instances of ~~certain~~ persons who cannot eat certain substances without suffering from eruptive diseases. Some cannot eat fish without exposing themselves to an unpleasant eruptive disease. I do not assert that sympathy offers a complete explanation of the modus operandi of medicines but that it assists us much cannot be denied. and how better explain the mod. operandi of ~~medicines~~ mercury when we say it is taken into the circulation and there stimulates the heart and arteries? Another thing which we should keep in view is that peculiarity in individuals & families, termed idiosyncracy, as it is a thing we frequently meet with in practice. Some cannot receive the odour of certain substances without the greatest inconvenience. whilst the same odour produces little or no comparative effect upon the organ of smell in the generality of men. Dr Brown who was a fellow pupil with me

Idiosyncracy et cet.
when with Dr Physic could never smell Ipecac.
without having a paroxysm of asthma.
Dr Barton had a pupil of whom he related the same
idiosyncracy. We have instances where even
the smell of fish has had very peculiar effects.
These idiosyncrasies are often hereditary and
perhaps by them Gout becomes a hereditary
disease. Another thing tho. purely pathologica
is not unworthy our attention. I mean the
incompatibility of differ actions with each
other & at the same time. The fact that no
two actions can exist in the same part at the
same time as first ably defended by Mr Hunter
is proved in a variety of instances.
The principle is illustrated in small pox &
vaccination — measles &c. &c. Tis true, observations
subsequent to those of Mr Hunter prove that
two diseases can exist in the same person
at the same time, as in the case of Mr

Incompatibility of a plurality of actions &c Hopkins's child - but they are only accidental exceptions to a general rule. The consideration of this is important because it frequently happens that to change the action, is the first & most important indication in the cure of a disease. Again, again & again have experimenters inserted vaccine matter during measles and never could both be developed without any apparent influence of the other. All this we may consider as proving the incompatibility of two actions existing at the same time in the same part of the system.

3d Lecture. In our preceding lecture we have said something on the subject of animal life & have explained it as approved by most of the professors in this university. - Now we go on to treat of Mat. Med. - Our branch not only comprehends active medicines but also alimentary articles whatever may be their nature, & the fluids which

we use as drinks. In former times much was said of diet by the Physicians, but now it seems to be consigned to the management of friends & nurses. In many diseases proper aliment is all that is necessary to effect a cure.
One thing I must suggest to you & you will consider it of some importance to remember it; that the diseases of the United States require a more rigid diet than those of any other country. In vain we do any thing and every thing without without attention to this important part of the treatment of our diseases, namely a rigid attention to diet. You will therefore see the necessity of attending to the articles of diet in the neighbourhood where you live, & you may rest assured that the dietetick part of your practical duties will form an important object in claiming your attention. You will always be asked Dr. Shall I eat apples, pears, peaches - oysters &c. &c. You must be able

to answer them readily and without equivocation. We shall now treat of the nutrientia, & under that head we mean & include all articles employed as food, drink or condiments. The ultimate composition of medicines not necessary to be known. We aim at facts & results, & leave the more nice distinctions and accurate analysis to nat. hist. & chymistry. Aliments may be divided into veg. & animal. And these into mild & acrid — Sugar is very nutritious — many odorous substances also are very nutritious as onions garlic &c &c — On vegetable the mushroom can be eaten by some animals, & to others prove poisonous. As the hemlock which poisons men, is eaten by the horse, & the ground ivy which exerts no active powers upon the human body, poisons the horse. Goats eat Stramonium without inconvenience, while poisons many other animals. There are certain poisonous medicines which by exposure to heat become perfectly innocent. Most of the med. used in diet as

A question whether man was designed that condiments possess considerable odour.

A question has long agitated the physiologists, whether man was intended for animal or vegetable food. We are surprised at the different modes of living among among differ. people, and astonished when we contrast the wonderful supper of Lucullus which cost $9000, with the simple & palin meal of Cicero. In some parts whole nations subsist on nothing but vegatables as in Persia, in Constantinople on cucumbers, in Asia & many other nations on Rice. Boerhave gives a case of a man who tried with how little life could be supported. Dr Stark made some exps to ascertain this &c Dr Hager of South Carolina was taken in endeavouring to rescue the Marquis L he was imprisoned & he eat bread and water, & had exallent health.

Whole nations live exclusively on animal food, as in the north of Europe. The Scythians lived exclusively on animal food. The Tartars also live on animal

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food, and we are told that the patagonians prefer the flesh of the horse to every other kind of aliment. the Africans on fish. So far as comparative anatomy would throw light upon the subject we should conclude from the structure of teeth &c that man was intended for both animal and vegetable food. It has been said that the intestines of carnivorous animals are not so long, & those of graminivorous longer & from it some ridiculous conclusions concerning chylification. But from all we are able to discover we must agree that both animal and vegetable food is best & that to kill & eat was one of the priviledges granted by providence. The inconvenience attending a diet exclusively of either is also a proof, however we must here allow for the influence of habit. a diet wholly animal produces eruptions on the skin as scurvy &c. while a diet entirely of vegetables induces dyspepsia and bowel complaints.

Of vegatable food

But we are struck with admiration at the manner in which nature adapts food to climates & we may say with confidence that of the two a vegatable diet is much the best. Sir George Stanton says that in China the inhabitants have none of those violent diseases which are found in European countries where so much flesh is used, & that they never suffer from inflammation after surgical operations &c. The same observation is applicable to Calcutta. We cannot say that this is entirely the result of vegatable food, but that it is in a great degree to be attributed to it.

Of Vegatable food. The parts of vegatables used as aliments are the seeds roots &c. As a general rule we may ascertain the quantity of vegatable nutriment in any article by the quantity of starch sugar & oil which it contains, but there are some exceptions as the mushroom, onion &c. The chyle after it is elaborated

contain much sugar. It was singular that Dr Cullen should have doubted of sugar being nutritious, how far he was right in referring so much to an acid I shall not inquire. That the human stomach can digest almost any thing, but that oil & sugar are more nutritious than an acid I am led to believe. Dr or B. Stark lived 14 days on olive oil and flour & increased his weight 4 or 5 lb. — Oil though very nutritious is not very easy of digestion. Dr Darwin said when not rancid easy of digestion. Olive oil is much used in the South of Europe where they use bread and oil as we do bread & butter. Mucilage & gum are very nutritious, the former is only a solution of the latter in water. Gum arabic is the most pure of these and as an article of diet in bowel complaints it is invaluable, tis nutritious & not acid, in Cholera Morbus an excellent medicine mixed with loaf sugar.

Cerealia

Lime water in mucilage of this gum very good in general cures of disease. With respect to the common remedy home water & milk, you will often find your patients vomit, but never when mixed ~~with~~ mucilage of gum arabic. This is excellent substitute for the former. The Caravans in the deserts of Arabia exist for weeks upon this alone. This being premised we shall now speak of the more important of the nutrientia as they are scattered over our extensive country by the liberal hand of nature.

Cerealia. Botanists class under this every substance that makes bread. S'Cullen says this class is useful by the quantity of oil which it contains, & the quantity of sugar also, but here he was very wrong. They certainly do contain the elements of sugar and oil but not in a seperate state. Minute chymical distinctions are never of much

Triticum

use in estimating the operation of medicines. — In the farinacea we include wheat Rye, Barley, Corn &c. They all contain much nutriment but they differ much in the quantity.

Triticum wheat. The natural history of this you are all acquainted with & you also know that it constitutes a large portion of the food of the inhabitants of Europe & america. — I shall say nothing of the process of grinding, but shall make some observations upon bread. The seeds of wheat are composed of mucilage, starch & gluten. The latter is insoluble in water ardent spirit spirit, oil, or ether. Bread is composed of flour, water, & yeast mixed up together, while fermentation is going on it is baked, this immediately stops fermentation. We raise the temp. & evaporate the moisture requisite for carrying on the process of fermentation. — Dr K. has proved in a very ingenious thesis 1790 that this is correct, and done himself

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human, & science a benefit. The yeast which is put into the bread contains fixed air, heat being applied the air becomes elastic, the water disappears &c. Later chymists say that one lb of flour will make a pound & a quarter of bread. The farinacea differ much in medical properties according as they are prepared. Unleavened bread is very ancient as we find from reference to the bible. & we find in some cases unleavened bread is both nutritious & easy of digestion. Bread is very useful in mixing with the saliva & nutritious parts of animal food & carrying it to the stomach. The very nutritious quality of bread is proved by Dr Franklin, who lived 12 days on 10 lb bread. Stark lived on bread & water, when he eat 38 ℥ of bread & 2 lb water he got fat. The greatest quantity he was able to take was 46 ℥. And he found that the 38 ℥ agreed with him better than 46. Which shews that even in bread & water there is a great

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quantity of nutriment, & hence the propriety of prohibiting your patients from eating too much of it, when it constitutes their diet.
Some cannot when in health digest unleavened bread - and yet in a disease of the bowels crackers are an excellent article of diet. Stale bread is much more easy of digestion, this you must all remember & never let your dyspeptic patients have fresh bread. - In all chronic cases bread must be well baked. There is nothing perhaps more difficult of digestion than dough. A gentleman of my acquaintance one of the trustees of this university eat some dough or half baked bread, & was seized with apoplexy. Half baked and even fresh bread have produced it. A most valuable beverage for the sick is made by an infusion of toasted bread in water. It becomes very useful after blows on the head & in all those cases where a rigid diet is indispensable.

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nothing can be more important than an attention to this. A man said he lived low when he drank a pint of wine per day, but I tell you gentlemen, a low diet is toast & water. Some have lived forty days on this alone.

Dr Dorseys 4th Lecture. At our last lecture we commenced with saying something on the subject of the Nutritive ~~and~~ said that the subject had been of late years much overlooked. One of the class wished to know after lecture which branch or part of my lectures was the most important. I cannot say which, but only tell you that the present subject is quite worthy your consideration. However unimportant the fermentation of bread may at first appear to you it is far from being so. We mentioned the man who thought he was living low when he took a pint of wine per day, & indeed this might have been low living to him if his usual quantity of drink & aliment was much greater.

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There are some men who live almost wholly on vegatable diet, to such when attacked with fever we should give only bread and water. —

I proceed to day with the subject of bread.

It has been observed that when people live on vegatable diet, little inflammation takes place. The people of Asia live on unfermented rice, & in Europe & America still, a large portion of the inhabitants subsist on unfermented bread & they enjoy good health. In the course of my practice I have found few evils from its use. Hypocrates observed that unfermented bread was not so light & easy of digestion as when it is well fermented — I don't intend to quote him often as authority but in this I thot, he was worthy of mention. But sailors after long feeding on unfermented bread feel weak when they change to fermented.

To a healthy stomach either is very good.

Bread raised by leaven is acid, that by yeast is not.

Secale

Pastry or that crust made by kneading up flour, fat or butter & water, makes one of the most indigestable of all aliments. Pies & tarts should always be forbid to the flatulent, dyspeptic &c. The under crust of the pye is the most difficult of digestion. I have known a crust of this to remain a week in the stomach & very little changed. Boiled dough or dumplings, very difficult of digestion, in the philosophical transactions a case is recorded of death from eating apple dumplings. Another error is, that pastry is always served up after dinner & hence when the stomach is almost exhausted with previous digestion a fresh burthen is imposed upon it.

Secale. Rye resembles wheat in its properties but contains more sugar & more spirit, hence its sweet taste, & you know the quantity of spirit made from it in every part of our country.

wherever we find it distilled it becomes our duty as guardians of the public health to raise the voice of opposition against a practice so pernicious to our country. The cheapness of the stimulus makes it easily obtained by the lower class of people & incalculable mischief ensues.

Rye is also more ascescent than wheat. It is also more opening to the alimentary canal & often nothing but this requisite to cure costiveness. In prolapsus ani Rye mush is the best diet I know of — Dr Physic has seldom succeeded without this and as far as I know of is the author of the practice. Rye flour is one of the best materials for Cataplasms. Hordeum Barley contains saccharine matter or else it is more easily evolved than any of the Cerealia. Dr Cullen says it is less nutritious than the others. It make bread but not so good. The gradation of different nutriments are nearly as follows. — Water — toast & water —

barley water or gum arabic water with sugar. Now all these are safe in common cases but in violent ones — I have known fever kept up in pleurisy by giving too much drink — Barley water contains a good deal of nutriment. Pearl Barley is not so good as the common, & the process of preperation by no means improves it, but on the contrary it is more likely to be subjected to chymical changes from which the husk protects. Oryza. Rice. — This differs from all the others in containing less ascescent matter. It is very nutritive & supports the people of the most populous empires. In Dyspepsia, Dysentary & Diarrhœa it is the best diet we can employ when well boiled. It has been supposed to possess astringent qualities, but for this there is little foundation. Dr Percival exposed the above articles to the process of fermentation and found that all went into the ascescent

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for men. Cal. if act - but if he has
the degree Real cuf of peles -
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fermentation before the rice – It was slow and more like animal matter. There are few dyspeptic patients but can digest rice if boiled rightly. Whatever irritates the bowels in Dysentary & Diarrhœa occasions purging. I know of nothing better here than a decoction of rice it makes one of the most pleasant & proper food for the sick. Boiling rice flour to a jelly and sweetening it with loaf sugar is a most pleasant aliment for the sick, a little rose water may improve it. Children are very fond of it. Rice is good in soup – Rice milk constitute one of the best kinds of food in bowels complaints & I have cured them by a diet of rice milk alone. In occasional diarrhœa of the summer a table spoon full of rice boiled in milk every hour will often effect a cure. Avena – Oats only used in this country for cattle but in Scotland the inhabitants use it much for bread &c. A hasp made of

Fagopyrum & Zea.

oat meal is an aperient diet and mostly has the effect of opening the bowels, hence the impropriety of using oat meal gruel in many diseases.

Fagopyrum, Buckwheat one of the luxuries of our country and buckwheat cakes and plenty of butter are very good, but not for the dyspeptic — the stomach of the sick will not bear them — nor short cakes, nor muffins. Zea. Maize Indian Corn a native of america is extremely nutritious. It is sufficiently saccharine to be malted. Corn when eaten whole & in a green state is very indigestible as is proved by its passing unchanged thro' the alimentary canal. Dr Barton said that this was the most nutritious & valuable of all the Cerealia. Mush is a healthy & digestable mode of cooking it and it is so much softened by boiling that it becomes the best way it can be used. —

The best made mattresses which we have

Cycas Circinalis, & Orchis Morio, Arrow root.
are made of the inner chuck of the corn, if we except those made of curled hair. In Italy these are much used. Sir H. Davy has tried to analyze all the cerealia. Wheat had 955 parts in 1000 of fecula. Barley & rye less — peas and beans 574. Potatoes 200. Sago is the pith of the Cycas Circinalis. It is often spoken of as a demulcent but it is only simple gluten. When well boiled in water it forms an eligible aliment for the debilitated. When you prescribe sago don't give wine with it or you will make it too stimulating. Without wine it is safe and wholesome. I recommend to your perusal Dr Percivel's book on this subject.
Tapioca this grows in South America. It is obtained from the root by maceration. By much boiling it is dissolved & makes a good aliment but it must be boiled at least 2 hours, when rightly cooked it is digestion.
Arrow Root, This is the product of the maranta

aceraundinacea & grows in the West Indies & particularly in Jamaica. It also grows in Georgia — Dr Barton received a letter from there which stated its growth &c &c. It affords more mucilage than any thing else with which we are acquainted. — In bowel complaints give no milk with it. In convalescence particularly this is a valuable remedy. I have now finished the Cerealia.

5th Lecture. At our last lecture we finished what we had to say on the cerealia, and now we go on to speak of other vegatable aliments without regard to their botanical affinity, as this throws no light upon their nutritious or medical properties. The summer fruits next claim our attention they differ much from the cerealia, and are composed mostly of an acid & saccharine matter. The orange is a perfect example of them. Dr Cullen says they are good for allaying thirst which they

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do hastily by their cooling quality and by stimulating the mucous excretions of the mouth fauces & stomach. They excite the secretions & keep open the bowels, but they are not nutritious in a great degree. In cases of dyspepsia & Gout they are to be avoided. I have seen gout and spasm of the stomach & bowels take place from their use. — This effect is to be explained by the quantity of acid in the stomach. Besides ~~the quantity of acid~~ what is in the fruit itself, the stomach generates much acid. The pulp of these fruits is very indigestible. Even water melon is very indigestable in some instances, & I have seen it vomitted up 3 or 4 days after it was taken into the stomach and very little changed. Flatulency vomitting purging — cholic &c follow the use of these if unripe. — The juice of the orange is easy of digestion, but the pulp is very difficult. This observation is applicable to the water-melon, lime apple, lemon &c. among my patients I

find the pulp of these always occasions inconvenience to the convalescent. Dr Cullen gives a pretty good account of all these & I shall refer you to him. There are many among them that should be boiled, others roasted — Stewed with rich syrups they constitute the sweet meats of the confectioners, and when in this state they are best when eaten with milk. Peaches, quinces, Raspberries make the best — In this way the Crab apple is a very pleasant fruit, which when dried is very improper to be eaten. One of the best preparations of these fruits as a diet for the sick, is the common roasted apple. It prevents hunger & keeps open the bowels. I often prescribe it when much nutriment would be improper. Water-melons and cucumbers sometimes the most dreadful cholics and yet are much eaten in this City in summer. An absurd and fatal prejudice has prevailed among

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people that it was necessary to swallow the stones of cherries and other fruits, in order to assist digestion; it arose from those mechanical ideas of digestion which considered them as necessary to assist digestion in the human stomach, as pebbles in the stomachs of the Gallinacea - This danger of this we must be convinced of from a recollection of the many dreadful symptoms induced by it as witnessed in colics, flatulency and death. Dissection in these cases has shewn a large ball of stones so agglutinated as to stop up the alimentary canal. The Edinburgh volume of transactions contain an account of death from cherry or plum stones, and Dr Physick gives a case which fell under his notice of death from persimmons. When such things have been swallowed we should first give an emetic and then castor oil until the alimentary canal is completely evacuated. Dr Cullen gave the preference to the pulp of grapes over all the others; but professor Barton preferred

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the strawberry, perhaps the latter comes to greater perfection in this than in any other country. — Grapes have been prescribed in dyspeptacy but they are very improper, except the juice. — Of the dried fruits we may say that they are good in costive habits. Many of our own fruits dried have excellent qualities. The roots, leaves, stems &c of several vegatables particularly the varieties of the cabbage are much used as wholesome aliment. Among these we may mention the Cauliflower. Many of them are indigestable and improper for the female stomach.
The Carrot is tender and a good vegetable but not very easy of digestion. I now hasten gentlemen to another important article of our aliments the Potatoe. This as we have before told you contains much fecula, according to the expts. of H. Davy about one fourth of it is composed of this. In great diseases of the bowels it has been accused of

inducing flatulency &c. But is certainly the safest and one of the most valuable of all vegetables, and when mixed with flour makes an excellent bread. Upon the whole it is one of the most valuable & wholesome vegetables we have. I refer you to Dr Cullen for the remainder of the vegetables and go on to say something of Animal Food. — But first we must recollect that the eccentricities of the human stomach are very great. After the fortieth year Dr Rush said the stomach became shy of new acquaintances. This is not quite so correct as another observation of his, that green peas when they first come almost always produce Colics &c. That animal food was intended for man is not at the present day denied, and it has been used in all ages and in most countries. The flesh of quadrupeds has been said to be the most proper aliment because it is already assimilated to ourselves. This is a bad argument & would prove that blood is the best food for man

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when we know that blood is one of the most indigestable of all aliments. It would also reject the cerealia as they are so dissimilar to our fluids & solids — Now the Cerealia are among the substances most easily converted into Chyle & Cullen must be wrong. It is not necessary here to inquire what are the peculiar properties or qualities of animal food the ultimate composition is of better consequence to us and chymistry has thrown little light on the subject of comparative nutrition. Dr Cooper of Carlisle has given some opinions relative to the nutritious quality of fats &c. to which I refer you and I hope you will not forget that the process of digestion is partly formed by the gastric liquor. The flesh of carnivorous animals is not so good as others. old authors have endeavoured to account for this on the principle of alkalescency, but this is entirely unworthy of notice.

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The tenderness of animal flesh is influenced by sex, age &c. The female is more tender than the male. — The male being more dense — and castrated animals are better than the male that can propagate his species. We have evidence of this in our beef &c. Age also influences the flesh of animals: it becomes more dense & tough as the animal grows older. But lamb or veal is more difficult of digestion than beef or mutton. Dr Fadyce says that veal is very indigestable. Pork also should be eaten in small quantities. We should use vegetable diet almost entirely for our patients in this country. We may lay it down as a general rule that fat animals are more easily digested than lean ones. more gluten in one than the other. Some parts of beef more difficult of digestion than others you all know how this applies to beef steak. The blood, glands, ligaments, cartilages, tendons, &c. you know are not to be digested, but after long boiling, then they become a wholesome

Mutton et cet.

article of diet. By being made into a jelly by papins digester they are an excellent aliment. These animal substances are good for the quantity & quality of nourishment contained in them. The flesh of the Cow is composed of gluten and fat but less than pork. You know how much the flesh is altered by castration, that the bullock is tender & the bull tough. The Capon differs from the cock. Veal when just killed is difficult of digestion, but when kept two or three days it loses that stringy quality which you find at table.

Mutton should not be killed before 6 or 7 years, at this age it comes to perfection. They say that our mutton in this country is not so good as in some parts of Europe, but we do not attend to the rearing it, or it would be equal to the English or welsh. Pork has its fat diffused more completely throughout

Wild meats. Birds &c.

the cellular substance, than any other meat & is improper as food for the sedentary, but fresh pork with many vegatables constitutes a good aliment for the healthy & labouring class.

The wild meats of our country are very good. our venison is perhaps the best in the world and easy of digestion both when fresh & when long kept. It is not very nutritious.

Birds supply us with some of the many luxurious articles of the table. Their flesh differs from quadrupeds, and those that feed upon flesh are not so good. The duck tho, it sometimes eats flesh is very good. The turkey stands at the head of them and in this country is very large. We have it weighing 25 lbs. The common fowl differs little from the turkey the soup made of them is one of the best things for the sick. An old cock or hen is one of the toughest things we can find & should be boiled several hours.

Domestic Fowls

an old fowl contains much gluten, the hen is more tender than the cock and the capon is better than either. In america the capon is almost unknown while in Europe & India they are very common. The goose & duck are more difficult of digestion than those which have been mentioned. It would consume too much of our time to enter into much discussion on this subject, for further information read Cullen. Dr C has said that the blood rendered the animal more alkalescent and has accounted for it in this way, for the duck &c being so good - of all these the black duck is the best and Dr Barton said it was because it lived on vegetable matter.

As a general Rule fowls of white meat such as the turkey, chicken &c are more digestable & less stimulating than those of black flesh as the goose, duck &c. The turkey should be nearly

grown before it is killed, & kept a few days before it is cooked, which renders it more tender. The young chicken not so nutritious as the chicken cock or hen. 5th Lecture. At our last lecture we commenced the consideration of the subject of animal food. Among these may be mentioned Eggs, they are the most nourishing & least stimulating of all animal food and as easy of digestion. This aperion is very old & was expressed by Harvey. Aristotle said that that which would nourish the chick must be good for man, and we think a soft boiled egg is along with oysters &c the best food for convalescents, and hard boiled eggs the worst. The white of a hard boiled egg when dry will scratch glass. The only eggs we use are those of the hen & occasionally the ducks. Eggs are much used in countries where religion interdicts the use of flesh. The different ways of cooking eggs as omelets &c are all less healthy

than soft boiling. When you use them for your patients don't forget to cut off the hard part. Poaching eggs by putting them into hot water is a good way of cooking them. When boiled they should only be left in two & ½ minutes after the water begins to boil. Eggs are often used to give flavour to other food — as veal cutlets, oysters &c. When these are cooked with flour they are not so good. But I shall resume this subject when I get upon Cooking. Eggs with brandy & wine constitutes the most nourishing & sustaining diet we can use in Typhoid diseases. Eggs and sugar are extremely nutritious, I now speak of both parts of the Egg. Galen preferred the Yolk I also prefer it as the most valuable part of the egg. — But we should always be careful to have our eggs fresh. Stale eggs are not so good —

Fishes

if they have the least odour which does not belong to the fresh egg, they are not fit for use.—
As I before mentioned they are among the best articles for patients in diseases of a typhoid type, & in the typhoid pleurisy which raged in this country a few years past they when mixed with wine & brandy forming forming what is called Eggnog, were very efficacious in supporting and raising the patient.
The next animal substance we shall mention is Fish. In some countries as in the north of Europe they constitute the only diet of the inhabitants. Heller said it was probable that Fish was the first animal used by man as food, because he would take that one which died without a groan.
Herring & shad afford subsistance to more people than any thing else, and the quantities caught at a haul are almost incredible. It has been said that in the Potomac 372,500 were caught at

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we draw. There seems to be as much difference in different kinds of fish as in flesh. — Cat fish and some others are more difficult of digestion than perch, sheeps head &c. Mackarel, eel, & cat fish are to most people difficult, but the palate should govern us in their use.
It is said that a diet of fish is favourable to generation — This is not confirmed by experience The esquimaux & other people live almost entirely on fish and are by no means fruitful.
From what I have learnt I believe fish are not favourable to longevity, it appears that the people who live on them never survive 50 or 60 years.
Lyer Bacon said that fish were antiseptic, but but as the doctrine of putrescency in the living body has been exploded, the conclusions must fall with the original proposition. We do not think that people subsisting on fish are less subject to inflammatory diseases than much

Shell fishes

as live on vegatables. when the Catholics use them for 5 or 6 weeks they mostly become weak, it may be determined positively that fish is less nutritious than flesh. — Dr Cullen opposed the opinion of Haller but we can decide pretty correctly by reflecting on the comparative qualities of Bacon & fish.

Shell fishes. Oysters. There are a species of shell fish more perfect in the U.S. than in any part of the world. — Some Europeans don't like our oysters at first, but after using them for some time prefer them to all others. The English oysters are smaller & much inferior in quality to ours.

There are some animals also used as condiments, among these are oysters. The best way of using oysters is raw or roasted. when fried they are not so good the fat & flour that is used ~~to the~~ ~~[illegible]~~ makes them indigestable. Bread soaked in oyster liquor constitutes one of the most pleasant and agreeable aliments that sick people can take

Continued

Dr Physic was the first person who used it, & has formed patients take it when every thing else was rejected — I wish you to remember this.

Clams are tougher and harder than the oyster and ~~used~~ mostly to give flavour to soups. —

With respect to snails &c which are eaten in some countries, I shall say little of them, but they are used by cancer cures — they first kill the snail with salt and ~~water~~ then put it to phagadenic ulcers. — I avoid the natural history of all these you will perceive, and include them under the general name of shell fish.

But these last are insects — Dr Cullen has made no distinction between the lobster & crab. But the lobster is much more tough & has less oil than the crab. The crab being less dense & tough is therefore easier of digestion. We have a soft crab in the Chesapeake which is very good. But the lobster is the most indigestable of all

Reptiles &c.

these, one of them is taken with salt, the other with mustard & other condiments. We often find colic vesicpelous &c produced by lobsters, never by crabs, by either of them if they are not perfectly sound. Of the amphibious animals, there are few in this country that we eat. I wish we did not eat snakes - we have several instances of this recorded, & Dr Barton mentions that several British officers eat the soup & flesh of the rattlesnake. The viper has also been used but I am glad to find this loathsome reptile no longer mentioned in the Mat. medica. The sea turtle and Terrapin are used, the French are peculiarly fond of the soups of these. The properties of these soups depend much upon the condiments used with them, and they seem little superior to that of veal. The Terrapin is better than the snapper, and the physicians here now give it to their patients with safety. The Epicures say it should be cooked with butter and pepper.

Milk

Milk next claims our attention, & the difference between mothers milk & cows is known to you. Milk you know is composed of curd, oil and water. Cows milk when fresh is nutritious, & some medical men have said that owing to its similarity to chyle it must be taken up by the absorbents without undergoing any change. But nothing can be more erroneous, & as we have before said if this were true blood would be the best food — Milk you will recollect is coagulated in the stomach and subjected to the common process of digestion — It does however constitute an eligible diet for persons in early and advanced life — In early life particularly it is proper but in very advanced life the stomach don't bear it quite so well it being apt to produce acidities in that viscus. In many diseases we are under the necessity of prescribing milk, and it is the most important remedy we can find. — I witnessed its good effects in a venereal patient

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whom I saw in consultation with Dr ~~Physic~~ Rush, he was to use his own words rotten with the disease and from Caput ad Calcis was in one blotch of loathsome ulceration. — He was put on a diet of milk and bread & in a short time was ~~to be~~ so much recruited as to be out of danger. —

Lecture 7th At our last lecture we considered milk as a diet, and I gave you some cases in which its efficacy in removing disease was evinced when unassisted by medicine. During the reign of the humoral pathology milk was recommended, because they thought it was immediately converted into chyle. Dr Cullen has said it is good in cases where the fluids are vitiated 1st, you know we at the present day have discarded the ideas of vitiation of the fluids by putrescency. But you will not forget that milk in debility induced by whatever cause is our most important remedy. In Lues venerea and many other diseases where the powers of the system

Continued

are exhausted and in Cancer particularly you will find it the most important article of the Mat Medica. A lady was under my care with Cancer, she suffered much from pain and seemed to sink daily under the irritation produced by it. I put her on a diet of milk and vegetables and she was much relieved by them. — I hope therefore in Chronic Lues venerea & Cancer &c you will not forget its value. In Phisis, milk has been much used and apes milk is still a popular remedy in Europe. Galen in recommending milk said it should be taken from the breast. a modern writer has said that apes milk is an apes remedy (here a story from Van Swieten). There are several other kinds of milk used but we should not use them unless we are necessitated to do so. Milk, when boil'd the blood vessels & has done much mischief in inflammatory diseases and in some stages of Phisis. A diet of milk is too

Cream, Curd, Whey, Cheese &c

nourishing in these cases. Whey in some cases is very useful but we may give the milk in those cases where the febrile action is not increased by it. We have before mentioned that milk is a heterogeneous fluid. The cream floats upon the top and the greater the surface exposed to the air the more cream we have. — Butter is a highly nutritious substance made by churning cream, and possesses all the properties of animal fats. Its coagulation is effected in several ways by suffering it to stand — by acids — Rennet &c. Wine also coagulates it. Rennet is mostly used after the curd is dried it forms Cheese. This differs in quality according to the different qualities of milk from which it is made. They are all very nutritious, stimulating &c & are proper for the laborious. Skim milk cheese is among the most indigestible of all aliments. Cream cheese are easiest of digestion and resembles butter more in

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their composition. I have called your attention before to their property of checking diarrhœa. I mentioned to you a case in the Penn. Hospital. He was a venereal patient much exhausted by the disease and weakened by diarrhœa. Various remedies were administered without relief. I gave him cheese in various forms toasted &c. it was very useful to him. This though very insoluble in the stomach, is good for the working and those who undergo much exercise. —
The oil of old cheese has been applied to ulcers of late with very promising success. A case of ulcer in the nose was cured by Dr Physic and myself with this remedy which had resisted Lunar Caustic — Tar water &c. The older the cheese is the more stimulating & acrid it becomes, epicures prefer it old & mouldy. Toasted cheese is very indigestable. The whey constitutes by far the largest portion of the milk.

Buttermilk & Wine Whey

Dr Young of Edenburg has proved that 7/8 of the whole quantity of milk is water. Oil sugar and several other things are found in milk by different chymical processes. The whey of milk is unquestionably the most proper part of this fluid in pulmonary consumption. In dyspepsia, frequently an obstinate disease, you will often find milk to disagree with your patients and here whey will be the best part you can employ. Butter contains much oil & is therefore nourishing, and buttermilk has been advantageously used in some diseases. Dr Shippen used to give it to a relation of his who was thereby much benefitted. Wine whey is among the most pleasant and valuable ways of preparing this for the sick and I hope you all will make yourselves with the manner of making it. You boil your milk and while it is in the act of effervescing add half the quantity of wine. Madeira, Cherry, Lisbon or Teneriffe. You then heat it again

to the boiling point & strain it thro' muslin. You will also take care to seperate and take out the curd whole and don't break it. Strain it thro' a thick piece of muslin. Now if you want a weak wine whey, to add lib. wine will not make it so but you must dilute the strong wine whey with mucilage of gum arabic, you may put about one ounce to a pint of this which makes a gently stimulating and very nourishing drink. Dr Barton thought it difficult to produce intoxication with wine whey, because the alkohol is evaporated. Certainly much of the alkohol does evaporate, but still we are able to produce intoxication with it.

Milk punch is another way of using milk but it is improper in cases where the powers of the alimentary canal are impaired.

It is made by mixing rum sugar and milk together & then grating a little nutmeg over it.

Cooking

You will be cautious therefore how you administer this in weak habits & when the stomach and bowels are disordered, it is useful in chronic debility but in most cases of convalescence wine whey is better. In Typhoid pleurisy which has prevailed in our country, milk punch has been much used and often with good effects. The chymical history of milk I have omitted but refer you to Cullen and others this finishes what we have to say respecting food from the animal & vegetable kingdom. Dr Barton was in the habit of mentioning calcareous earth carbon &c &c as nutritious, on these we shall only observe that the human organs are capable of converting almost every thing into chyle. The physician gentleman must often go from the Chamber to the Kitchen, and I shall next give you some observations on Cooking. This process is the application of heat for the purpose of preparing our food. Some articles are impaired by heat and

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others are not. Cabbage and Turnips are not improved by cooking. Turnips when raw seldom produce indigestion. Apples when roasted are much better than in their crude state, they become much less flatulent. The indian turnip you all know when cooked becomes a mild esculent. The cooking of animal food also has different effects upon it. The object of cooking it is, to render it more savoury, soluble & easy of digestion. Keeping meat a few days after it is killed renders it tender as we find in poultry and venison. The game which is killed on the highlands of Scotland is used in London for the table six weeks afterwards — We know when it is kept too long, by its putrid ~~Stale~~ taste or smell. Rancidity is another thing that animal fats are subject to, and the goose and duck is often so from keeping. There are certain condiments that deserve a place in our

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course and the most important is salt.
It is the best antiseptic we have, and is used for preserving our animal food from putrefation.
When I say antiseptic you will understand me as only meaning a matter which preserves from putrefaction out of the body. Solomon has wisely asked— "Is there any taste in the white of Eggs?" He might have asked the same with respect to all animal substances in their natural state. Salt meat may be set down as the most eligible food for labouring people. Beef venison and mutton are often dried and smoked and used as a relish; you will often inquire of your patients if they are in the habit of taking much of these articles especially your dyspeptic patients, from whom they must be positively interdicted.
Bacon forms a good part of our diet in this country. We have before stated that Pork is more indigestable than Beef or Mutton.

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When we eat ham we are apt to take too much food, & it also creats thirst. You may give fish for its stimulating, but not for its nourishing quality — You will recollect I differ with Dr Cullen on this point. Salt provisions have been celebrated in Cholera Infantum &c but they are to be suspected and are often dangerous. Mr Goldsborough of Maryland had a child that had been troubled with the Cholera for some time, at length he brought it to Phila I attended the child and in its convalescent state they seemed disposed to give it a slice of ham — It was obviously worse by it, and was almost killed. It had previously lived on arrow root. Two other cases of a similar nature have occurred with in my knowledge so much for ham in Cholera Morbus.

Dr Rush was in the practice of giving ham as animal food. We should when we use hams

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boil them in the manner recommended by Rush. who got the mode from Mr Jefferson, namely to boil them twice — I am surprised at an observation of Dr Willich on this subject — he says boiled hams are not so digestable. — and prefers broiling them. This is a great error; when boiled the way recommended by Mr Jefferson they are far from being indigestable, and when broiled they contain much empyreumatic oil. In a state of health and in warm climates they should be often used.

Dr ——— says much against their use, he inveigh them like a madman. — They are certainly a proper food where the powers of the system are unimpaired but for the convalescent and valetudinarys they must be given with caution.

Fish are salted and constitute a great portion of human subsistance — Shad and herring are the most common. They, as we have before said contain little nourishment but their stimulus is very good.

Pickling & Soupes.

Vinegar this used to excess injures the powers of the stomach. Dr Rush has very properly compared pickles to Vinegar in a solid form.

One way of applying heat is by Boiling, whereby the food is rendered more soft and soluble.

Raw meat is longer in undergoing the digestive process than any — the Indian who has a long voyage to perform prefers his meat raw. and labouring people prefer sausage &c &c.

In some cases the soup itself is better than the meat, and Count Rumford found that the potatoe lost 1/40 of its weight in boiling.

The French carry the art of cooking to the greatest perfection. They boil their soups for a considerable length of time, they take 5 lbs of poor beef & 8 or 10 lbs of water and boil it 8 or 10 hours over a slow fire. Skim off the fat, and lay it aside. Then extract the soupe to cold till the oil on the top congeals and you can get the whole of it away.

Beef Tea

I wish to caution you against a common diet for the sick, Calves foot jelly as it is used is adapted to few cases, & is in many instances used improperly. These things may seem unimportant and ill suited to the serious occupation of a public lecturer, but you will find them of useful practical application and seldom do you find a nurse who can make soups rightly. — Another thing you will observe that is not to suffer flatulent vegetables to be put into your soups and do not suffer them to be thickened with flour. You want a preperation of beef only & tell your cook so, I speak now of cases of the stomach being disordered, or the bowels out of order. These soups are very important for the sick and convalescents, for old people &c.

Beef tea you will all know how to make. Cut your beef into small pieces, (Choose the lean) wash the blood out of it and then boil it taking care to skald it first. — boil it in covered vessel — Can sweeten

says the animal should fast, previously to killing it. This is useless refinement. — Chicken broth and soups are not to be used in inflammatory diseases, they are not less nutritious than beef tea. Chicken broth is often improper in yellow fever and even fatal in some cases; and in that ticklish state of the system is one of the most dangerous things that can be given to the sick.

Lecture 8th At our last we said something of cooking, and of the best way of making soup for the sick. It is not necessary to enlarge on it here, we shall only add that various spices & wines are sometimes added to soup, they only serve to render it more stimulating. — Calves foot jelly you ought to reprobate as a dangerous article of diet for convalescents. You know it is made up of spices &c &c and is not fit for the sick. Beef tea is much better. The very bone of animals may be

converted into soups & jelly by Papin's digester but such soups have a watery taste and are not savoury. A method of preparing vegetable soup when a low diet is required, has been practised by Dr Physic, and in this City is known by the name of Dr Physic's soup. Take three large potatoes, an onion and a slice of bread, and 3 pints of water, boil it down to two - season it with salt &c to give it flavour.

It is an excellent weak soup and is not so stimulating a chicken broth. If you have a mind to call it chicken broth to suit the partiality of your patient for that you may put a chicken wing in it.

In Roasting flesh the aqueous parts are evaporated and it is more stimulating than when boiled. Count Rumford invented an oven for roasting meat, it is of no great importance to the cook.

Broiling meat is a rapid way of roasting, the juice is confined after the outside is crisped, and is

among the best modes of preparing flesh for the table. — Beef steak, mutton chops &c are cooked in this way — Frying, under certain circumstances should be prohibited, particularly in flour &c. Stewed meats are wholesome —
There are many condiments used, of salt I have spoken; pepper mustard &c should be mentioned, they all stimulate the tounge and are improper in inflammatory diseases.
Our most powerful condiment is Capsicum it is important as an article of medicine, also vinegar is a good condiment when used in moderate quantity. —

Drinks. of these the most proper is water it is proved by those nations best health who use it exclusively. Water is often impregnated with mineral substances &c In this country, the water of springs, wells, and rivers is good when in the former we find lime, salt, &c in solution, next to simple water

Of Drinks - Cider - Malt liquors

the infusions of certain vegetables in the form of teas, as balm and sage tea & next apple water. then mucilages which are a solution of gum in water. This mucilaginous matter may be called the condiments of drink. Many other fluids might be mentioned but as they all contain much water it is not requisite to notice them.

From the days of Noah to the present, mankind have been attached to ardent spirits.

The physician is bound gentlemen to wage continual perpetual warfare with this Hydra of calamities. In America we have an excellent substitute for them in Cider - It contains little alkohol but is not to be used in gouty habits or in habitual disorder of the digestive powers. Malt liquors are used much in this as in European countries. In London agreeably to a report made in 1810 for one year 1. 333. 178 Barrels were made in that City alone. —